

LISTING OF CLAIMS

1. (currently amended) A fluidized bed reactor having a reactor wall coating, wherein said reactor wall coating is formed in situ on a reactor wall during polymerization of olefin monomer, said reactor wall coating having a thickness of at least 100 μm and a molecular weight distribution comprising a major peak having:
 - (a) an Mw/Mn ratio of less than 10;
 - (b) an Mz/Mw ratio of less than 7, and
 - (c) a maximum value of $d(\text{wt\%})/d(\log \text{MW})$ at less than 25,000 daltons in a plot of $d(\text{wt\%})/d(\log \text{MW})$, where MW is the molecular weight in daltons, wherein said wall coating is formed in situ on a reactor wall during polymerization of olefin monomer in the presence of bimetallic catalyst and an aluminum alkyl cocatalyst to form a reactor wall coating on the interior reactor wall.
2. (original) The reactor wall coating of claim 1, wherein the thickness is at least 125 μm .
3. (original) The reactor wall coating of claim 1, wherein the thickness is at least 150 μm .
4. (original) The reactor wall coating of claim 1, wherein the Mw/Mn ratio is less than 4.
5. (original) The reactor wall coating of claim 1, wherein the Mz/Mw ratio is less than 4.
6. (original) The reactor wall coating of claim 1, wherein the maximum value of $d(\text{wt\%})/d(\log \text{MW})$ is at less than 15,000 daltons.

7. (original) The reactor wall coating of claim 1, wherein the maximum value of $d(\text{wt\%})/d(\log \text{ MW})$ is at less than 13,000 daltons.
8. (original) The reactor wall coating of claim 1, wherein the major peak has an M_n value of less than 7000.
9. (original) The reactor wall coating of claim 1, wherein the coating has an initial voltage potential V_0 of at least 400 V, where V_0 is the absolute value of the voltage potential measured immediately after application of a charging voltage potential of 9 kV for a period of 20 ms.
10. (original) The reactor wall coating of claim 9, wherein V_0 is at least 600 V.
11. (original) The reactor wall coating of claim 9, wherein V_0 is at least 800 V.
12. (original) The reactor wall coating of claim 9, wherein V_0 is at least 1000 V.
13. (original) The reactor wall coating of claim 9, wherein the coating has a voltage retention value V_{60} of at least $0.8V_0$, where V_{60} is the absolute value of the voltage potential measured 60 s after application of the charging voltage potential.
14. (original) The reactor wall coating of claim 13, wherein V_{60} is at least $0.9V_0$.
15. (original) The reactor wall coating of claim 9, wherein the coating has a voltage retention value V_{120} of at least $0.75V_0$, where V_{120} is the absolute value of the voltage potential measured 120 s after application of the charging voltage potential.
16. (original) The reactor wall coating of claim 15, wherein V_{120} is at least $0.8V_0$.
17. (original) The reactor wall coating of claim 15, wherein V_{120} is at least $0.9V_0$.

18. (original) The reactor wall coating of claim 9, wherein the coating has a voltage retention value V_{300} of at least $0.75V_0$, where V_{300} is the absolute value of the voltage potential measured 300 s after application of the charging voltage potential.
19. (original) The reactor wall coating of claim 18, wherein V_{300} is at least $0.8V_0$.
20. (original) The reactor wall coating of claim 1, wherein the major peak contains at least 50 wt% of the total weight of the molecular weight distribution.
21. (original) The reactor wall coating of claim 1, wherein the major peak contains at least 60 wt% of the total weight of the molecular weight distribution.
22. (original) The reactor wall coating of claim 1, wherein the major peak contains at least 70 wt% of the total weight of the molecular weight distribution.
- 23 - 42. (cancelled)
43. (cancelled)
44. (currently amended) A fluidized bed reactor having a reactor wall coating, wherein said reactor wall coating is formed in situ on a reactor wall during polymerization of olefin monomer, said reactor wall coating having a thickness of at least 100 μm and a molecular weight distribution comprising a major peak having:
- (a) an Mw/Mn ratio of less than 10;
 - (b) an Mz/Mw ratio of less than 7, and
 - (c) a maximum value of $d(\text{wt\%})/d(\log \text{MW})$ at less than 25,000 daltons in a plot of $d(\text{wt\%})/d(\log \text{MW})$, where MW is the molecular weight in daltons ~~The reactor wall coating of Claim 1,~~

wherein said olefin monomer comprises at least one monomer selected from the group consisting of ethylene, propylene, C₄-C₂₀ alpha olefins, and mixtures thereof.

45. (currently amended) A fluidized bed reactor having a reactor wall coating, wherein said reactor wall coating is formed in situ on a reactor wall during polymerization of olefin monomer, said reactor wall coating having a thickness of at least 100 μ m and a molecular weight distribution comprising a major peak having:

- (a) an Mw/Mn ratio of less than 10;
- (b) an Mz/Mw ratio of less than 7, and
- (c) a maximum value of d(wt%)/d(log MW) at less than 25,000 daltons in a plot of d(wt%)/d(log MW), where MW is the molecular weight in daltons

~~The reactor wall coating of Claim 1,~~

wherein said coating comprises aluminum and zirconium.